

CLAIMS

We claim:

1. A catalyst comprising:
a metal oxide support;
a coating comprising zinc on the metal oxide support; and
palladium in contact with said coating;
wherein the catalyst is possesses a volumetric productivity of at least 10,000 ml
H₂ / ml catalyst-hr.
2. A method of alcohol steam reforming comprising passing water and an alcohol in
contact with the catalyst of claim 1 under conditions sufficient to obtain a volumetric
productivity of at least 10,000 ml H₂ / ml catalyst-hr.
3. The method of claim 2 wherein the alcohol is methanol.
4. The method of claim 3 wherein the water and alcohol are contacted with the
catalyst at a temperature in the range of 250 to 320 °C.
5. A method of making a catalyst, comprising the steps of:
providing a solid metal oxide support;
adding a solution comprising dissolved zinc to the solid metal oxide support;
adding a base to increase pH; and
subsequent to at least a portion of the step of adding a base, depositing a metal
selected from the group consisting of Pd.
6. A catalyst made by the method of claim 5.